

PORTABLE AIR FILTRATION SYSTEM

ABSTRACT OF THE DISCLOSURE

5 A portable air filtration system includes a filter housing having an air inlet and an
air outlet. The filter housing defines a filtration chamber between the air inlet and the air
outlet. The portable air filtration system uses an ionizing mechanism, a filter media, and
an electrode to filter air. The ionizing mechanism ionizes particles within the air to a
negative charge. The filter media is disposed between the ionizing mechanism and the
10 air outlet for entrapping the particles. The electrode is disposed between the ionizing
mechanism and the filter media to establish an electric field. The electric field is
established between the ionizing mechanism and the electrode adjacent to the filter
media. The electrode is also electrically-connected to ground and to the filter media for
dissipating the negative charge of the particles entrapped within the filter media.

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